

Claims

5 1.- Heat exchanger which mainly consists of a housing with a bottom, an upper wall and side walls, whereby onto two pairs of opposite side walls, the front wall and the back wall respectively, are connected a supply and a  
10 discharge for the gas to be cooled, and whereby channels are provided in the housing, according to two cross directions, characterised in that, between the above-mentioned channels (14-15) and the above-mentioned back wall (6), means are provided for separating condensate  
15 from the cooled gas.

2.- Heat exchanger according to claim 1, characterised in that the separated condensate is discharged via holes (22) in the bottom (3) of the heat exchanger (1).

3.- Heat exchanger according to claim 1, characterised in  
20 that the above-mentioned means for separating condensate from the cooled gas are mainly formed of a series of corrugated vertical walls (17), upon which are provided crosswise extending ribs (19) extending from the bottom (3) up to the upper wall (8) of the  
25 housing (2), and whereby on the side of the above-mentioned ribs (19), directed away from the back wall (6), the above-mentioned holes (22) are provided in the bottom (3) of the housing (2).

*any of the preceding claims*  
3 4.- Heat exchanger according to ~~claim 3~~, characterised in  
30 that the above-mentioned ribs (19) are folded back at

their free ends to the front wall (4) of the housing (2).

<sup>10</sup> 5.- Heat exchanger according to <sup>any of the preceding claims</sup> ~~claim 4~~, characterised in that each of the above-mentioned ribs (19) are provided on the outside of a U-shaped bent part (18) of the above-mentioned corrugated walls (17).

~~6.- Heat exchanger according to claim 2, characterised in that below the bottom (3) of the housing (2) is provided a collector (28) for condensate, onto which is connected a discharge pipe (30).~~

<sup>1 or 2</sup>  
3.- Heat exchanger according to claim ~~8~~, characterised in that the above-mentioned collector (28) is made U-shaped.

<sup>1</sup>  
<sup>2</sup> 8.- Heat exchanger according to claim ~~2~~, characterised in that ~~between the means for separating condensate from the cooled gas and the above-mentioned back wall (6) is provided an opening (23) in the bottom (3) of the housing (2), which~~ <sup>said</sup> opening (23) extends over the entire, or practically the entire width of the housing (2).

<sup>3</sup>  
<sup>4</sup> 9.- Heat exchanger according to claims ~~7~~ and ~~8~~, characterised in that the leg (31) of the collector (28) which is situated closest to the back wall (6), is connected to the side edge (24) of the above-mentioned opening (23) on the side of the back wall (6).

<sup>any of the preceding claims</sup>  
<sup>5</sup> 10.- Heat exchanger according to ~~claim 8~~, characterised in that on the above-mentioned side edge (24) of the opening

(23) is provided a standing rib (25).

<sup>6</sup>  
~~11~~.- Heat exchanger according to claim <sup>5</sup>~~10~~, characterised in that the above-mentioned standing rib (25) is provided with a cross edge (26) on its free end  
s which extends over practically the entire opening (23).

<sup>7</sup>  
~~12~~.- Heat exchanger according to claim <sup>6</sup>~~11~~, characterised in that the above-mentioned cross edge (26), near the side walls (5-7) of the housing (2), is made shorter than around the centre of the housing (2).

<sup>8</sup>  
10 ~~13~~.- Heat exchanger according to <sup>any of the preceding claims</sup> ~~claim 8~~, characterised in that between the means for separating condensate from the cooled gas and the above-mentioned opening (23), below the bottom (3) of the housing (2), is provided a crosswise extending edge (27).

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Claims

(76)

- 5 1.- Heat exchanger which mainly consists of a housing  
with a bottom (3), an upper wall (8) and side walls (4 to  
7), whereby onto two pairs of opposite side walls, the  
front wall (4) and the back wall (6) respectively, are  
connected a supply (11) and a discharge (12) for the gas  
10 to be cooled and whereby means are provided in the  
housing (2) for separating condensate from the cooled gas  
which are mainly formed of a series of corrugated  
vertical walls (17) upon which are provided crosswise  
extending ribs (19) forming vertical gutters (21)  
15 extending from the bottom (3) up to the upper wall (8)  
of the housing (2), characterised in that holes (22)  
are provided in the bottom (3) for the discharge of the  
separated condensate from the gutters (21) via a  
collector (28), which collector (28) extends from at  
20 least under the holes (22) to under an opening (23)  
which is provided in the bottom (3) between the means  
for separating condensate and the back wall (3).